

HISTORIC AMERICAN ENGINEERING RECORD

INDEX TO PHOTOGRAPHS

HAER
SC
2-GRANV,
1-

GRANITEVILLE MILL

HAER No. SC-27

Marshall St.
Graniteville
Aiken County
South Carolina

Jet Lowe, HAER Photographer, September 15-16, 1998.

- SC-27-1 - VIEW OF SOUTHEAST ELEVATION OF GRANITEVILLE MILL COMPLEX. THIS ONE-STORY BRICK SECTION OF THE MILL WAS BUILT AS A WEAVE ROOM ADDITION IN THE 1860s. THE ORIGINAL MONITOR ROOF HAS BEEN REMOVED, AND THE WINDOWS BRICKED-IN. NOTE ONE OF THE TOWER CUPOLAS OF THE ORIGINAL 1846-48 MILL IN THE RIGHT BACKGROUND.
- SC-27-2 - GENERAL VIEW FROM SOUTHEAST OF SOUTHEAST/EAST ELEVATION OF ORIGINAL GRANITEVILLE MILL (1846-1848). THE WINDOWS WERE BRICKED-IN DURING THE 1960s. NOTE ORIGINAL STAIR TOWERS.
- SC-27-3 - VIEW FROM NORTHEAST OF EAST ELEVATION OF GRANITEVILLE MILL (1846-1848). SAME VIEW AS HAER No. SC-27-27-26 (CT).
- SC-27-4 - DETAIL VIEW OF SOUTH SIDE OF NORTH STAIR TOWER. GRANITE STRUCTURE IN BACKGROUND IS THE "PICKER HOUSE" AREA EXPANDED IN THE 1940s.
- SC-27-5 - DETAIL VIEW OF FIRST-FLOOR WINDOWS, MIDDLE OF EAST ELEVATION (BETWEEN TOWERS). NOTE STONE MASON'S MARKINGS AND ROMAN NUMERALS ON STONE COURSE AT BASE OF WINDOW.
- SC-27-6 - DETAIL VIEW OF EAST ELEVATION OF NORTH STAIR TOWER. NOTE ORIGINAL BELL IN CUPOLA. SAME VIEW AS HAER No. SC-27-27 (CT).
- SC-27-7 - VIEW FROM WEST (STANDING ON RIDGE OF ROOF) OF TOP OF NORTH TOWER CUPOLA. NOTE ORIGINAL BELL AND DORIC COLUMNS ON CUPOLA. ALSO NOTE DECORATIVE BELT COURSE TWO STONE COURSES DOWN FROM TOP OF TOWER.
- SC-27-8 - SOUTHEAST ELEVATION OF "PICKER HOUSE" END OF MILL. THIS STRUCTURE, LOCATED ON THE NORTH END OF THE MILL, WAS CONSIDERABLY ALTERED AND EXPANDED IN THE 1940s. THE

GRANITEVILLE MILL
HAER No. SC-27
INDEX TO PHOTOGRAPHS
(Page 2)

CURRENT GRANITE WALLS ARE REPLICAS OF THE ORIGINAL.

- SC-27-9 - VIEW ON ROOF LOOKING SOUTHEAST. FROM LEFT TO RIGHT, NOTE HICKMAN HALL (BACKGROUND), SOUTH STAIR TOWER CUPOLA WITH DORIC COLUMNS, AND VENTILATION APPARATUS.
- SC-27-10 - INTERIOR OF ATTIC, VIEW FROM NORTH END LOOKING SOUTHEAST. NOTE ENTRANCE TO NORTH STAIR TOWER ON LEFT. THE HEAVY TIMBER TRUSS SYSTEM IS VISIBLE ALONG RIGHT SIDE OF PHOTOGRAPH. THIS SPACE WAS USED FOR PRODUCTION THROUGHOUT THE HISTORY OF THE MILL.
- SC-27-11 - INTERIOR OF ATTIC, VIEW FROM SOUTH END LOOKING AT ROOF STRUCTURE ON EAST SIDE OF BUILDING. NOTE HEAVY TIMBER TRUSS SYSTEM WITH THIN, VERTICAL METAL SUPPORTS. THESE SUPPORTS WERE PROBABLY ADDED AFTER ALTERATIONS ON THE LOWER FLOORS IN THE LATE 1930s. THE PEELING PAINT ON THE TRUSS TIMBERS AND BEADED HORIZONTAL PANELING FURTHER INDICATES THAT THIS SPACE WAS FINISHED FOR USE AS A PRODUCTION AREA.
- SC-27-12 - VIEW LOOKING SOUTH AT INTERIOR OF NORTH STAIR TOWER ON SECOND FLOOR LEVEL. NOTE FROM LEFT TO RIGHT, STAIRWAY UP TO ATTIC, STAIRWAY DOWN TO FIRST FLOOR, AND DOORWAY TO SECOND FLOOR PRODUCTION AREA.
- SC-27-13 - INTERIOR VIEW OF SECOND FLOOR FROM NORTH END OF BUILDING LOOKING SOUTHWEST. THE MARKINGS ON THE FLOOR INDICATE FORMER LOCATION OF MACHINERY. THE ORIGINAL WOODEN COLUMNS WERE REPLACED BY METAL POLES IN THE 1940s. THE PERPENDICULAR INTERSECTION OF BEAMS AT THE TOP OF THE PHOTOGRAPHS INDICATES THE ORIGINAL LOCATION OF THE NORTH EXTERIOR WALL OF THE MILL. THIS END OF THE MILL WAS ALTERED AND INCORPORATED INTO THE EXPANDED "PICKER HOUSE" AREA DURING THE 1940s.
- SC-27-14 - INTERIOR VIEW OF SECOND FLOOR LOOKING SOUTH. NOTE SHIFT FROM WOODEN BEAMS TO METAL I-BEAMS TO THE RIGHT OF THE COLUMNS. THIS TRANSITION INDICATES THE LOCATION OF THE

GRANITEVILLE MILL
HAER No. SC-27
INDEX TO PHOTOGRAPHS
(Page 3)

ORIGINAL WEST (OR REAR) WALL BEFORE THE MILL WAS WIDENED
38 FEET IN 1938.

- SC-27-15 - INTERIOR VIEW OF FIRST FLOOR LOOKING NORTH. NOTE ORIGINAL WOODEN COLUMNS ON RIGHT. THE METAL COLUMNS ON THE LEFT INDICATE THE FORMER LOCATION OF THE ORIGINAL WEST (OR REAR) WALL BEFORE THE MILL WAS WIDENED.
- SC-27-16 - DETAIL VIEW OF ORIGINAL WOODEN DORIC COLUMNS ON FIRST FLOOR. THE METAL BRACING APPEARS TO HAVE BEEN ADDED LATER.
- SC-27-17 - VIEW SOUTHEAST OF 450 HP TURBINE IN BASEMENT OF GRANITEVILLE MILL. THE MAIN BEARING OF THE TURBINE IS AT LEFT CENTER OF THE PHOTOGRAPH. A LOMBARD REGULATOR CAN BE SEEN AT THE LEFT CENTER REAR. THE LARGE HANDWHEEL AT THE LEFT CENTER IS GEARED TO A SECTIONAL GEAR AT THE CENTER OF THE PHOTOGRAPH AND IS USED TO MANUALLY OPEN THE GATES AND ALLOW WATER INTO THE TURBINE. THE SMALL PULLEY ON THE END OF THE MAIN SHAFT NORMALLY WOULD HAVE A BELT CONNECTING IT TO A PULLEY ON THE LOMBARD REGULATOR. THIS BELT TRANSMITTED TURBINE SPEED (RPM) TO THE LOMBARD WHICH WOULD OPEN OR CLOSE THE GATES TO KEEP TURBINE SPEED CONSTANT UNDER VARYING LOADS. THIS TURBINE WAS INSTALLED IN THE REFIT OF 1912.
- SC-27-18 - VIEW SOUTHWEST OF 450 HP TURBINE INSTALLATION IN BASEMENT OF GRANITEVILLE MILL. MAIN FEATURE OF THE PHOTOGRAPH IS THE PENSTOCK CONDUCTING WATER TO THE TURBINE IN THE BACKGROUND. THE PENSTOCK IS OF RIVETED IRON CONSTRUCTION AND REPLACED A WOOD PENSTOCK IN 1882. THE COVERED OPENING IN THE CENTER OF THE PHOTOGRAPH ORIGINALLY CONNECTED TO A STANDPIPE WHICH EXITED VERTICALLY THROUGH THE MILL. THE STANDPIPE MODERATED WATER PRESSURE AND SERVED AS A SAFETY FEATURE IN THE EVENT THE TURBINE GATES WERE RAPIDLY CLOSED. (IF LOAD IN THE MILL WERE SUDDENLY STOPPED - SAY AT QUITTING TIME - THE GATES WOULD SHUT DOWN FLOW TO THE TURBINE. THE STANDPIPE OFFERED A PLACE FOR THE WATER, RAPIDLY MOVING THROUGH THE PENSTOCK, TO ESCAPE. IN A SHUT-DOWN SITUATION WATER WOULD BLOW OUT THROUGH

GRANITEVILLE MILL
HAER No. SC-27
INDEX TO PHOTOGRAPHS
(Page 4)

THE TOP OF THE STANDPIPE. WITHOUT A STANDPIPE OR MEANS OF
RELEASING THIS ENERGY THE PENSTOCK COULD BURST.

- SC-27-19 - VIEW EAST OF MAIN DRIVE PULLEY IN THE BASEMENT OF
GRANITEVILLE MILL. TURBINE IS ON THE OTHER SIDE OF THE WALL
TO THE LEFT OF THE PHOTOGRAPH. A LARGE LEATHER BELT
EXTENDING TO THE FLOOR ABOVE TRANSMITTED POWER FROM
THIS PULLEY TO SHAFTING ABOVE.
- SC-27-20 - VIEW WEST OF TUNNEL FROM BASEMENT OF GRANITEVILLE MILL
TO OUTBUILDINGS. TUNNEL IS USED TO CONDUCT WATER AND
OTHER UTILITY PIPES.
- SC-27-21 - VIEW EAST OF GENERATOR IN SOUTH END OF GRANITEVILLE MILL
BASEMENT. A LEFFEL HYDRAULIC VERTICAL SHAFT TYPE F
TURBINE CAPABLE OF PRODUCING 615HP AT 327RPM WITH 40 FEET
OF HEAD PRESSURE SITS BELOW THE GENERATOR SHOWN AT LEFT
CENTER OF THE PHOTOGRAPH. THIS IS COUPLED TO THE
WESTINGHOUSE THREE-PHASE, 60 CYCLE ALTERNATING CURRENT
GENERATOR IN THE PHOTO. THE GENERATOR DELIVERED 583 KVA
AT 600 VOLTS. IT WAS RATED AT 640 AMPERES. EXCITATION
POWER WAS PROVIDED BY A SMALLER GENERATOR MOUNTED
VERTICALLY ON TOP OF THE SHAFT COMMON TO BOTH
GENERATORS. THE EXCITER, AT TOP LEFT CENTER, PROVIDED 125
VOLTS AT 60 AMPERES. CONTROL PANEL IS AT THE RIGHT OF THE
PHOTO. THIS SYSTEM RAN UNTIL THE EARLY 1990s.
- SC-27-22 - VIEW WEST OF WESTINGHOUSE GENERATOR IN SOUTH END OF
GRANITEVILLE MILL. THE SMALL CYLINDER ON TOP OF THE
GENERATOR IS AN EXCITER GENERATOR USED TO PROVIDE POWER
TO MAGNETIZE THE ROTOR OF THE MAIN GENERATOR.
- SC-27-23 - VIEW OF SOUTH TAILRACE FROM GENERATOR ROOM, LOOKING
WEST TOWARDS HORSE CREEK. NOTE VARIETY OF BUILDING
MATERIALS INDICATING RENOVATIONS
- SC-27-24 - VIEW INSIDE BRICK ADDITION ON SOUTHWEST END OF ORIGINAL
MILL, LOOKING NORTH. NOTE WOOD TRUSSES AND FLUTED
COLUMNS (CAST IRON WITH EGYPTIAN REVIVAL CAPITAL). THIS
SECTION OF THE MILL WAS PROBABLY PART OF THE WEAVE ROOM

GRANITEVILLE MILL
HAER No. SC-27
INDEX TO PHOTOGRAPHS
(Page 5)

ADDITIONS DURING THE 1860s.

SC-27-25 - TANK IN SLASHER ROOM ADDED TO WEST SIDE OF SOUTH END OF MILL IN THE 1930S. SAME VIEW AS HAER NO. SC-27-28 (CT).

INDEX TO COLOR TRANSPARENCIES

All color xerographic copies were made from a duplicate color transparency.

Jet Lowe, HAER Photographer, September 15-16, 1998.

- SC-27-26 (CT) - VIEW FROM NORTHEAST OF EAST ELEVATION OF GRANITEVILLE MILL (1846-1848). SAME VIEW AS HAER NO. SC-27-3.
- SC-27-27 (CT) - DETAIL VIEW OF EAST ELEVATION OF NORTH STAIR TOWER. NOTE ORIGINAL BELL IN CUPOLA. SAME VIEW AS HAER NO. SC-27-6.
- SC-27-28 (CT) - TANK IN SLASHER ROOM ADDED TO WEST SIDE OF SOUTH END OF MILL IN THE 1930s. SAME VIEW AS HAER NO. SC-27-25.